

Operation Guide

Vacuum 40

Technical support and operation center

Gaussian Robot Operation Guide

GAUSSIAN ROBOTICS

Gaussian is the only commercial service robot company in the cleaning industry with ISO9001 international certification, China robot CR certification, United States UL safety certification and Europe CE safety certification. Up to now, Gaussian has provided 200 million kilometers' cleaning services to more than 2,000 customers in more than 40 countries and regions around the world. Gaussian is among the most outstanding enterprises in the marketability of commercial mobile robot and autonomous equipment.

Document History

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and Vacuum Modes



Operation Guide-Introduction to Appearance

Vacuum 40



Disinfection
spray inlet

[Disinfection spray inlet]

Disinfection spray and frame disinfectant inlet

Front tilt
camera

[Front tilt camera]

Avoid obstacle and retrieve real-time color image.

Front
horizontal
laser

[Front horizontal laser]

Detect the obstacle in the front for avoidance.

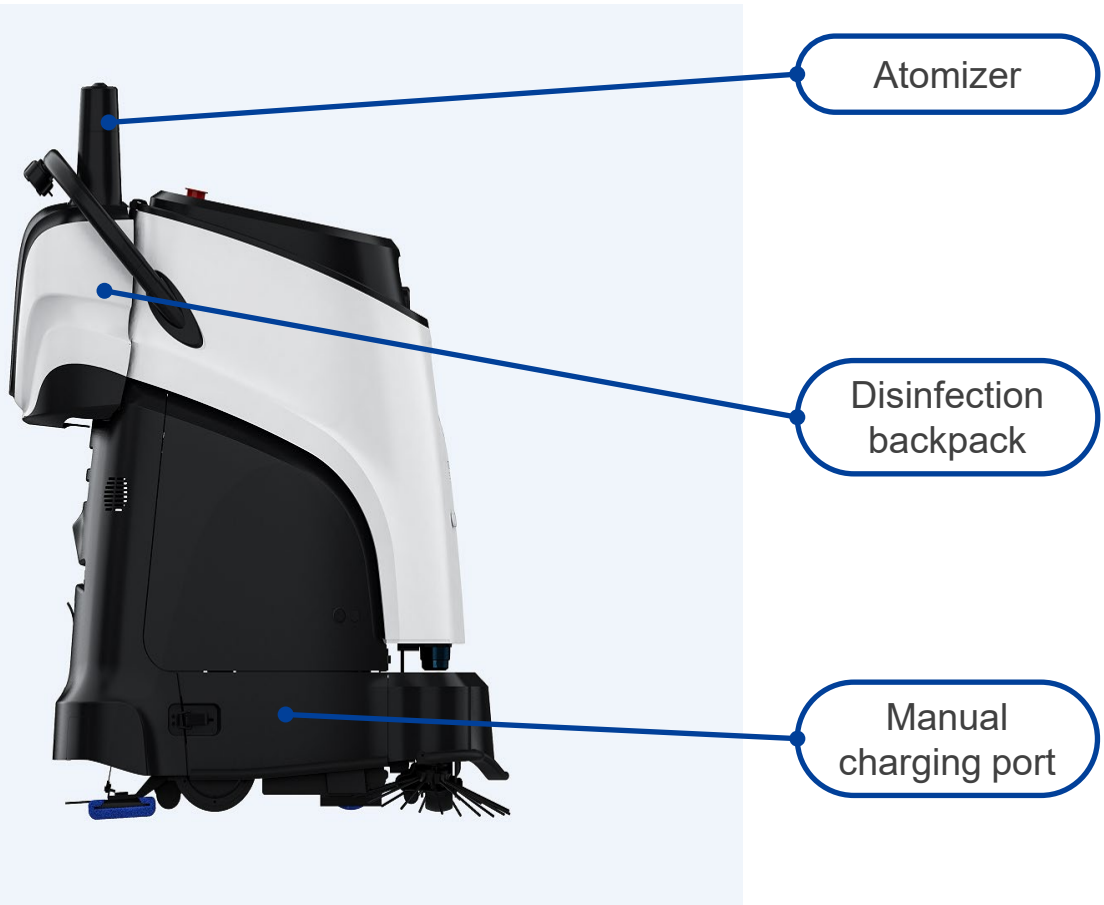
Collision front
shell

[Collision front shell]

Buffer the collision to avoid secondary damage.

Operation Guide-Introduction to Appearance

Vacuum 40



Atomizer

[Atomizer]
Eject disinfectant mist

Disinfection backpack

[Disinfection backpack]
Loaded with disinfectant spray

Manual charging port

[Manual charging port]
Interface to manually charge the robot

Operation Guide-Introduction to Appearance

Vacuum 40



Spray inlet

Disinfection backpack spray inlet

Manual push handle

Retractable manual handle is used to adjust the height

Enabling switch

The enabling switch makes the robot to move forward automatically in service. The robot stops if the switch is released.

Disinfection backpack

The disinfection backpack is used to atomize the disinfectant and aroma

Charging electrode

The robot will be aligned to the pile automatically, and then contact the charging pile with the charging g electrodes

Rear camera

Identify QR code and stain

Rear laser

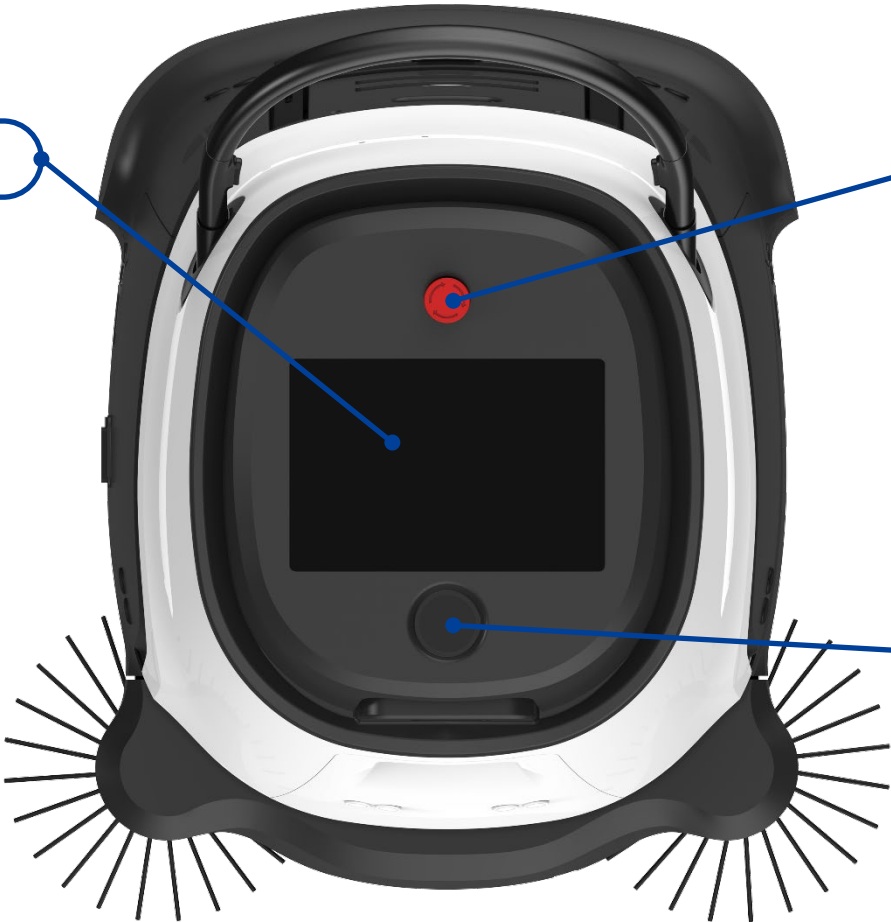
Identify charging pile and avoid obstacle

Operation Guide-Introduction to Appearance

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[Screen]
Adjust various parameters of the robot

Screen

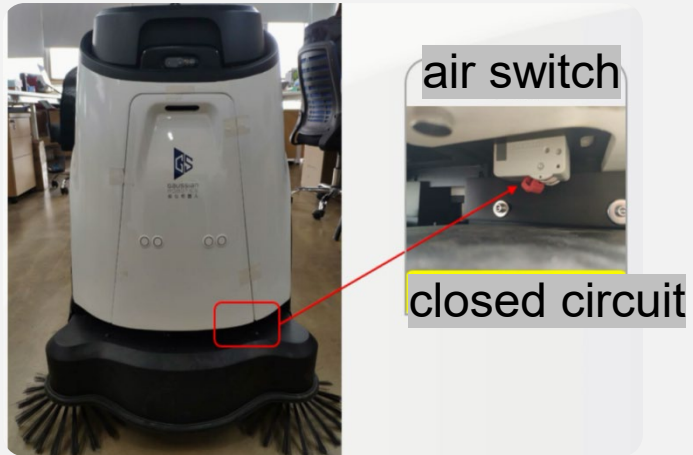


Scram button

[Scram button]
The robot will stop immediately when the button is pressed.

Top view camera

[Top view camera]
Avoid obstacle and retrieve real-time color image.



[Turn on the air switch]

The air switch is beneath the chassis of the robot. Turn the switch on. Whether the switch is on may be judged based on whether there is obvious resistance when the switch is pushed. The switch is on if there is obvious resistance when pushed, and off otherwise.

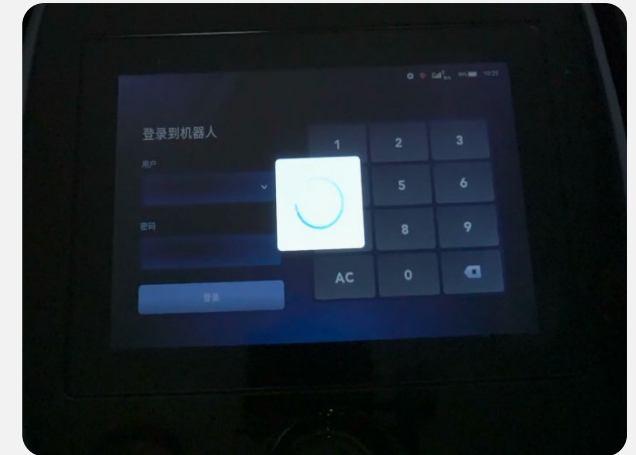
1



[Use key for startup]

Open the top cover of the robot and insert the key. Rotate the key to ON.

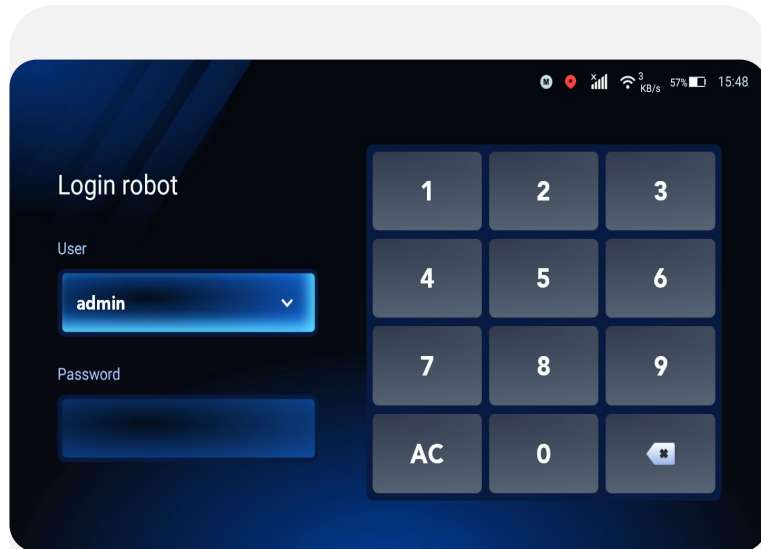
2



[Wait for startup]

Wait for around 30s. During the startup, the health status inspection of the complete robot will be performed.

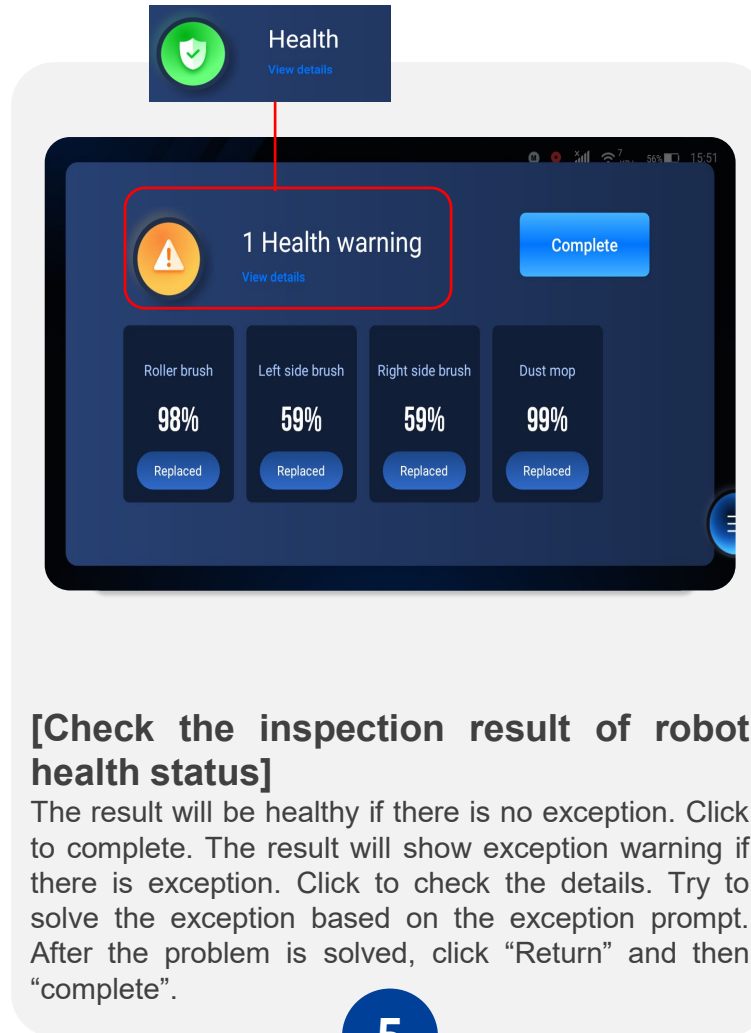
3



[Choose account and log in]

Choose USER and input password (the default password is 123456).

4



[Check the inspection result of robot health status]

The result will be healthy if there is no exception. Click to complete. The result will show exception warning if there is exception. Click to check the details. Try to solve the exception based on the exception prompt. After the problem is solved, click "Return" and then "complete".

5

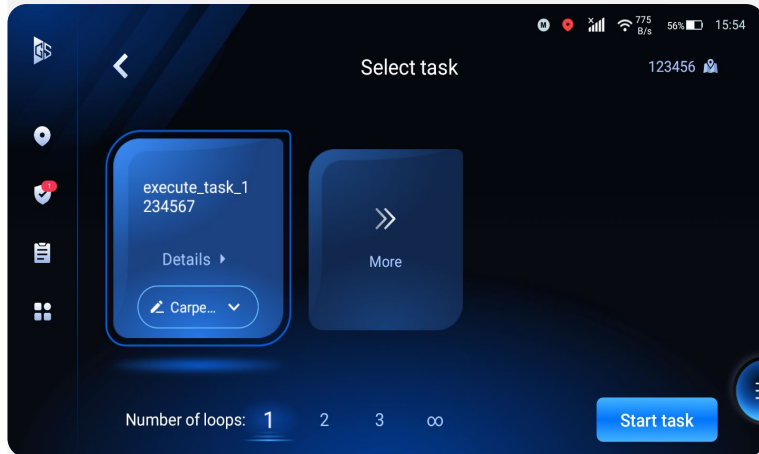
[Unable to solve the exception]

Please contact us in a timely manner if the exception cannot be solved. We will assign technical engineers to solve your problem at your door as soon as possible.

Note

Operation Guide-Storage after Turn-off

Vacuum 40



[Switch robot mode to manual]

Click the floating button in the bottom right corner and choose manual operation.

1



[Extract the push handle and push the robot to where it is supposed to be stored]

2



[Open the top cover of the robot, use the key switch to turn off the robot, and wait for the screen to go off]

3



[Open the head cover and remove the dust box cover]

4

[Precautions for long-term storage]

If long-term storage is needed, the following operations should be added to the above: remove the dust bag and pour the garbage, remove the filter element and clean the dust, open the rear cover, remove the dust push plate, and remove the dust push cloth for cleaning and drying.

Note



[Push the robot manually to charging point]

Click the floating button in the bottom right corner and choose manual operation. Subsequently, push the robot to the charging point.

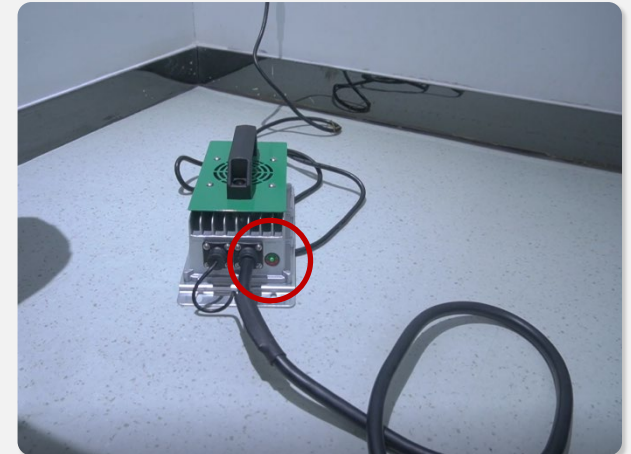
1



[Start charging]

Insert the plug of the robot into the red charging port on the side of the robot in the first place, and then insert the plug into the 220V power outlet. In this case, the red indicator is blinking, which represents the robot is charging. When the charging indicator is green, the battery is full.

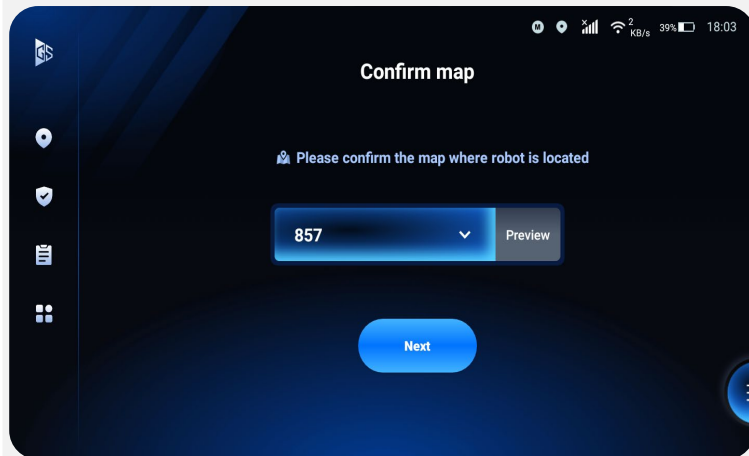
2



[End charging]

When the charging indicator is green, charging is complete. Pull out the 220V plug on the outlet. Pull out the red plug on the end of the robot, and use charger to complete the charging.

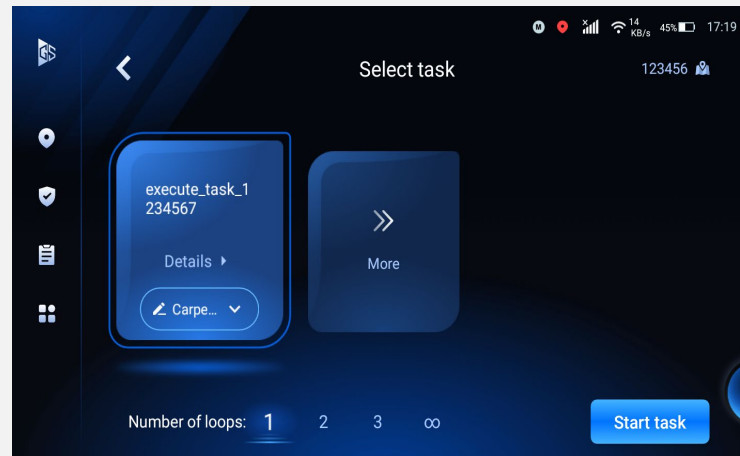
3



[Check the map selection]

Check the map selection and make sure the current choice is the map of area for operation.

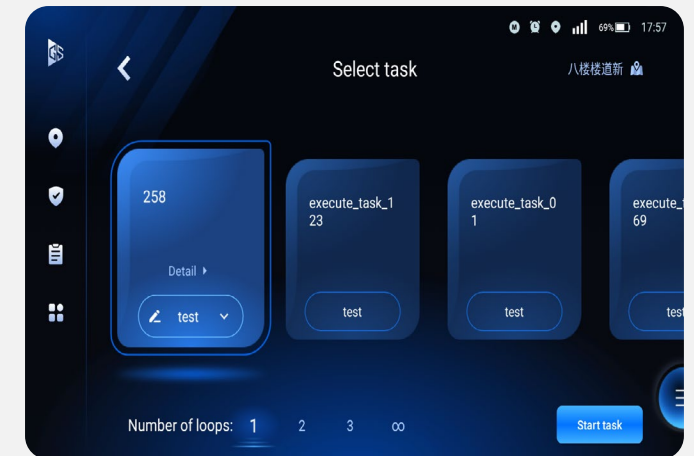
1



[Check the positioning]

Check the positioning and make sure the positioning icon is white. After the check is complete, click “next” to access task selection interface.

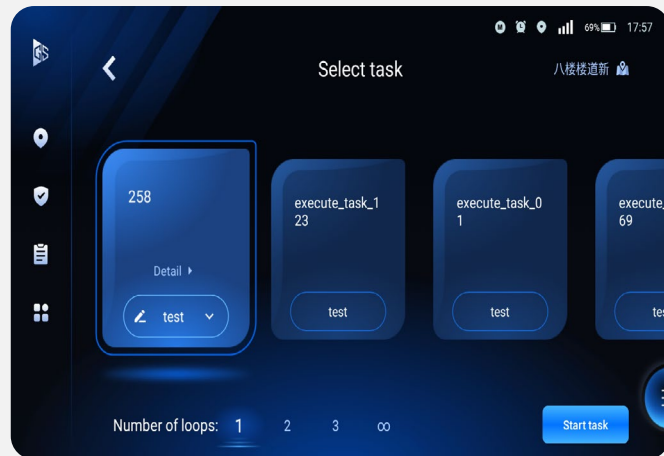
2



[Choose cleaning task]

In the task selection interface, slide the screen to the left or right to search for tasks. The cleaning area for the task may be judged based on the task name. After one task is selected, click detail. Zoom in or out by sliding the screen in the map interface or with your finger to check the accurate cleaning area for the task. Click return after confirming the area is identical.

3



[Choose cleaning task]

In the task selection interface, slide the screen to the left or right to search for tasks. The cleaning area for the task may be judged based on the task name. After one task is selected, click detail. Zoom in or out by sliding the screen in the map interface or with your finger to check the accurate cleaning area for the task. Click return after confirming the area is identical.

1



[Choose cleaning mode]

Click the dust push or cleaning button beneath the detail to select cleaning mode. After the mode is selected, click “confirm”.

2



[Select cycle times]

Click the cycle times on the bottom of the screen to choose the times of task execution (for instance, choose 1 if cleaning is intended for once). Click “start task” at last to start automatic operation. Choose the proper task and confirm it meets the demands. After the task commences, the robot will move to the task area for automatic operation.

3



[Suspend task]

If the task needs to be suspended during automatic operation, press the red scam button. Then click “abandon reset” on the screen.

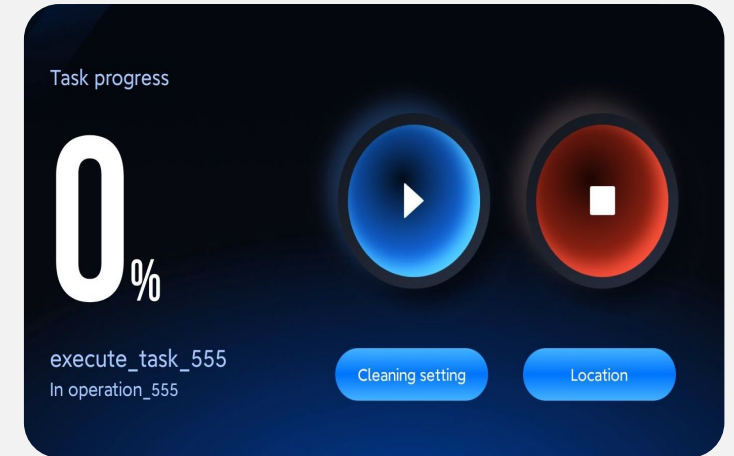
A



[Resume task]

After automatic operation is suspended, click start button to let the robot resume automatic operation. If the prompt shows the scam button is pressed, click confirm and then press the red scam button. The robot will resume the automatic cleaning task.

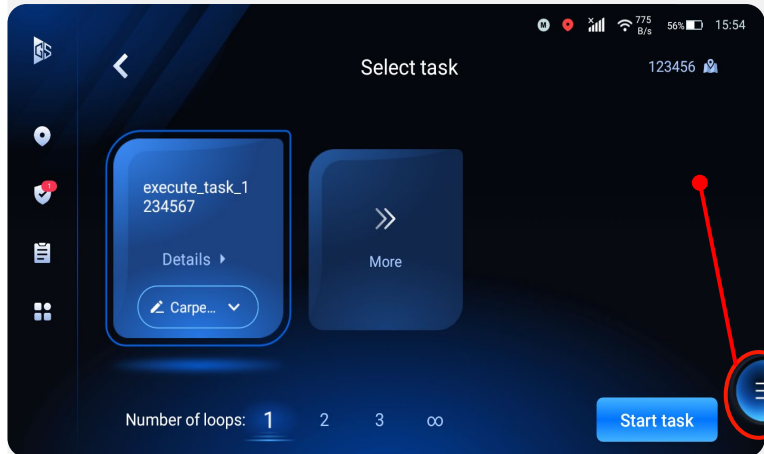
B



[End task]

If the automatic operation needs to be ended early, click “end” button on the screen after the automatic operation is suspended. Then click “Confirm” in the prompt box, and the automatic task will be canceled.

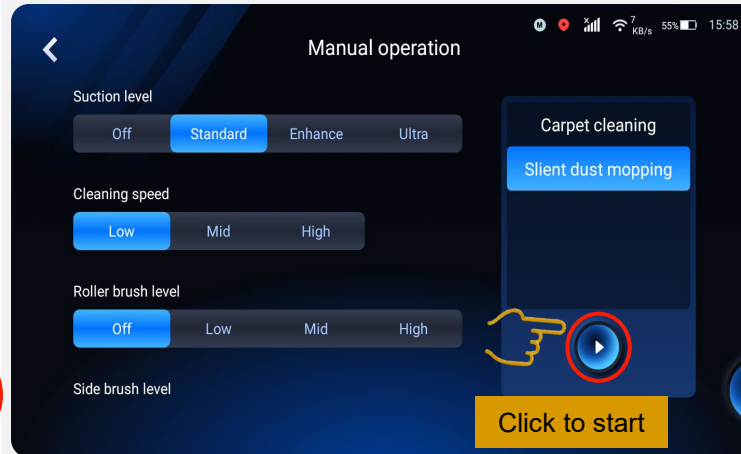
C



[Switch robot mode to manual]

Click the floating button in the bottom right corner and choose manual operation.

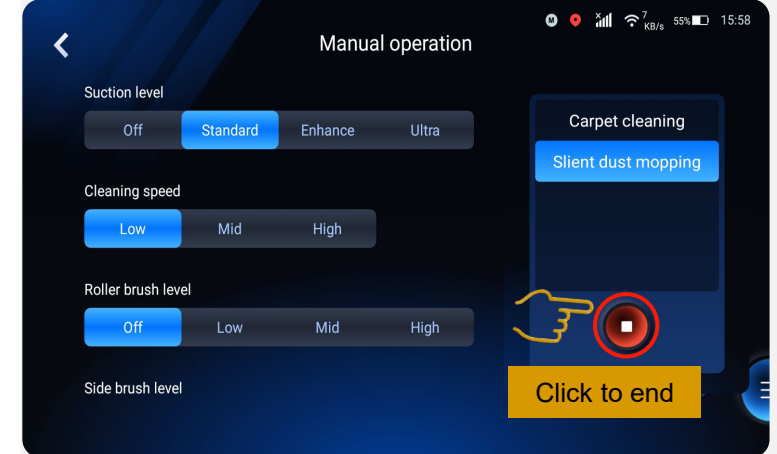
1



[Choose cleaning mode]

Choose dust push or cleaning mode. After revising the corresponding parameter on the left, click start button and push the robot for manual cleaning in the cleaning area.

2



[End operation]

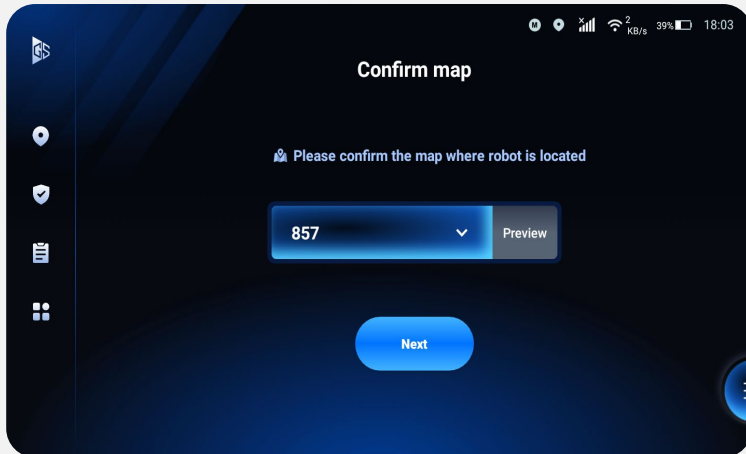
Click "end" button to end manual operation.

3

Operation Guide-robot Positioning

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Method 1: use the workstation or charging pile for positioning



[Push the robot back to the workstation or charging pile]

Switch the robot mode to manual and push it to the workstation or near the charging pile.

1



[Confirm the map and complete manual pile alignment]

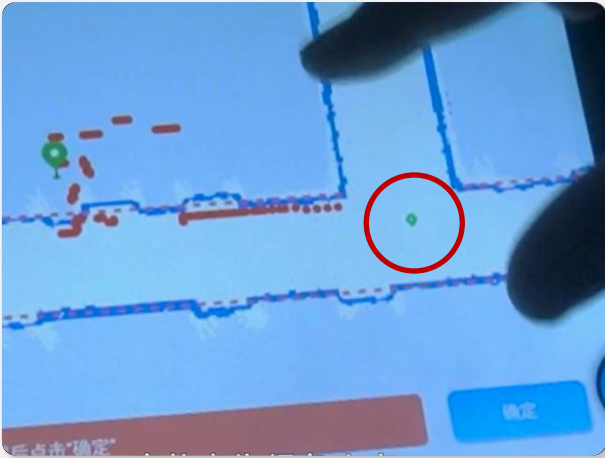
Click the map of the current environment of the robot on the screen. After the rear of the robot is aligned to the charging electrodes on the charging pile, push the robot gently from the front so that the charging electrodes of the robot and the charging electrodes of the charging pile are in full contact. Subsequently, confirm that the robot positioning icon turns white.

2

Operation Guide-robot Positioning

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Method 2: use the positioning point for positioning



[Choose proper positioning point]

Check for suitable positioning point on the map.

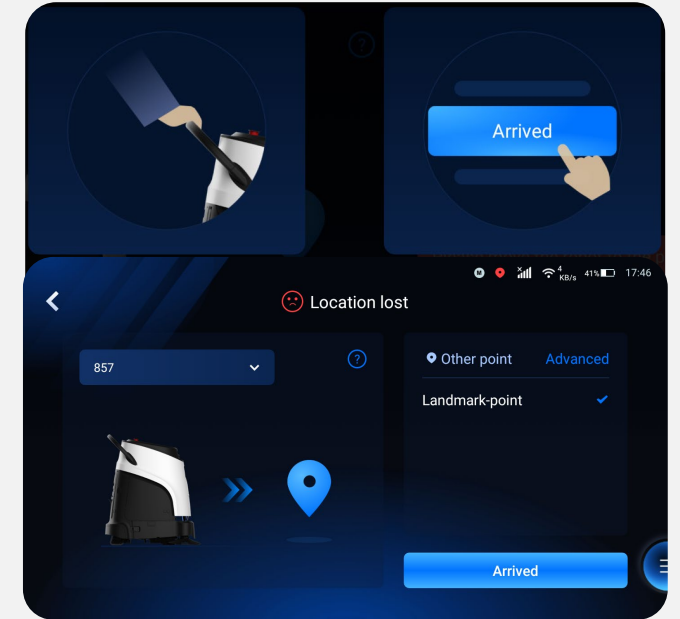
1



[Push the robot to the positioning point]

Switch the robot to manual and push it to the selected positioning point.

2



[Click arrived]

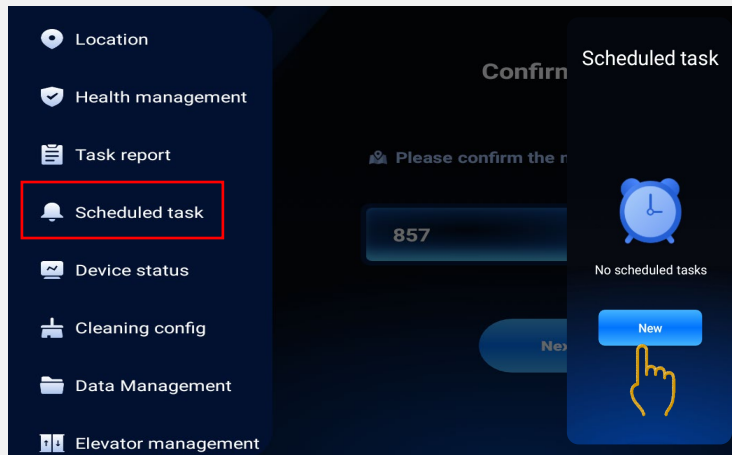
After the robot arrives at the positioning point, click the positioning icon to confirm the position. Click arrived and confirm. The robot will spin one lap in situ for automatic positioning.

3

Operation Guide-Timed Operation

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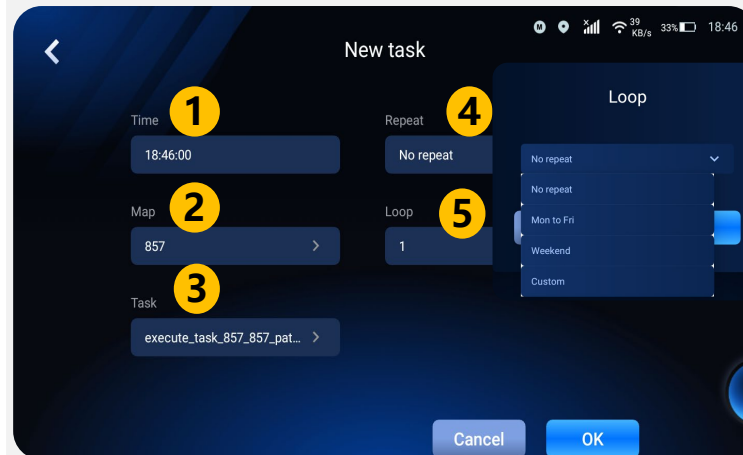
Set timed task



[New timed task]

Click the side bar of the screen and select timed task. Click “create” to access timed task interface (when nothing is set in the timed task, the “create” button is in the middle of the screen; when there is task in the timed task, the “create” button is in the bottom right corner of the screen).

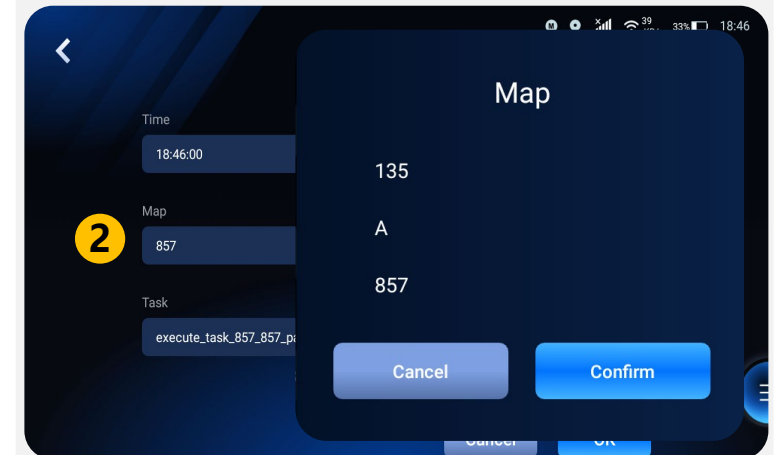
1



[Set time for timed task]

Click the option box beneath “time” to adjust when to execute the timed task.
Click the option box beneath “repeat” to adjust the working days to execute the timed task.
After adjustment is complete, click any other position of the screen.

2



[Set area for timed task]

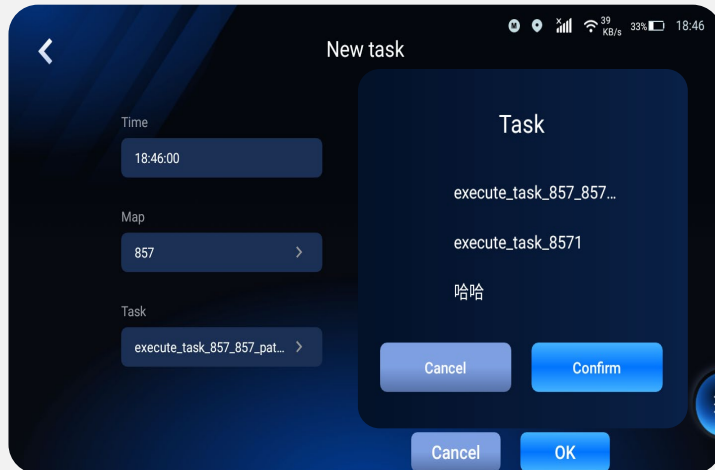
Click the option box beneath “map” to adjust the ambient map for the timed task (for example, if the timed task should be executed on the 4th floor, slide the screen up or down to view the existing ambient maps, and choose the 4th floor).

3

Operation Guide-Timed Operation

Set timed task

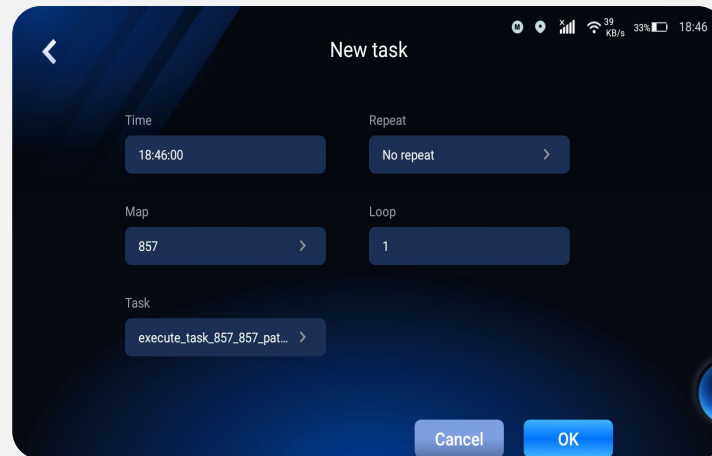
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[Set timed task type]

Click the option box beneath "task" to adjust the specific cleaning for the timed task (for example, if the cleaning task should be executed in the middle of the 4th floor, slide the screen up or down to view the existing cleaning tasks). Click the name of cleaning task and subsequently confirm it.

4



[Set times of timed task]

Click the option box beneath "cycle" to adjust the times of executing the cleaning task as set in the timed task (for example, if only one cleaning is needed and repeat is unnecessary, input digit "1").

5



[Timed task setting successful]

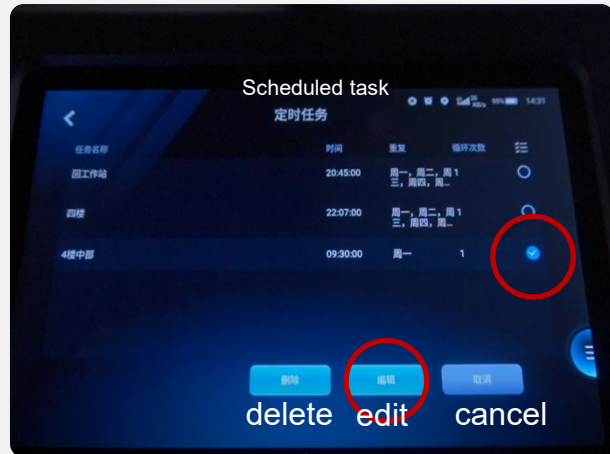
After the aforesaid settings are confirmed and saved, the robot will execute the cleaning task called "middle of the 4th floor" at 9:30 every Monday morning.

Note

Operation Guide-Timed Operation

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Change timed
task



[Change timed task]

For example, change the timed task dedicated for 9:30 every Monday to 10:30 every Monday. Choose the circle behind the timed task and click "edit". Adjust the time and eventually click "confirm".

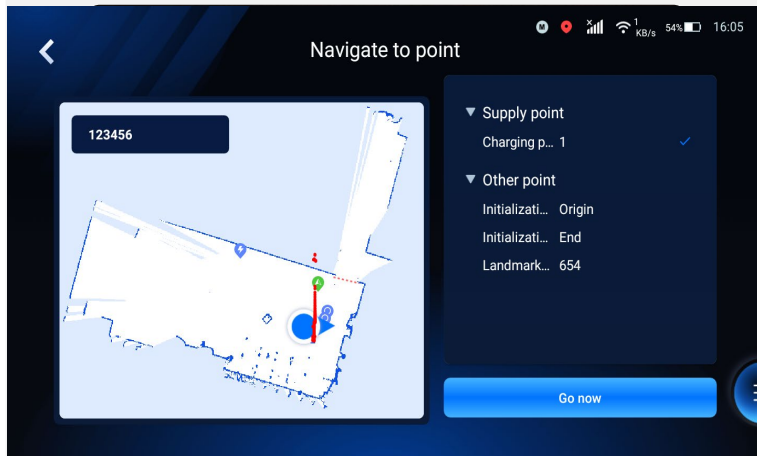
A



[Delete timed task]

If a timed task is not needed, delete it. Choose the circle behind the task and click "delete". Eventually click "confirm".

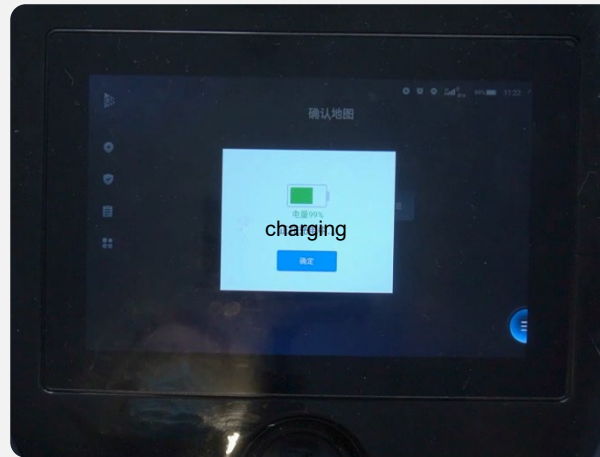
B



[Execute go-home task]

Click the floating button and choose go-home. Choose the “charging point” beneath the “supply point”, and eventually click “go immediately”.

1



[Status after returning to workstation]

After the robot navigates to the proximity of the workstation, it will go to the pile automatically for charging. After the robot goes to the pile successfully, it will charge automatically and the page will display the real-time battery. If the robot automatically returns to the workstation during operation due to battery, it will automatically drive away from the workstation when the charging is complete and resume the unfinished task.

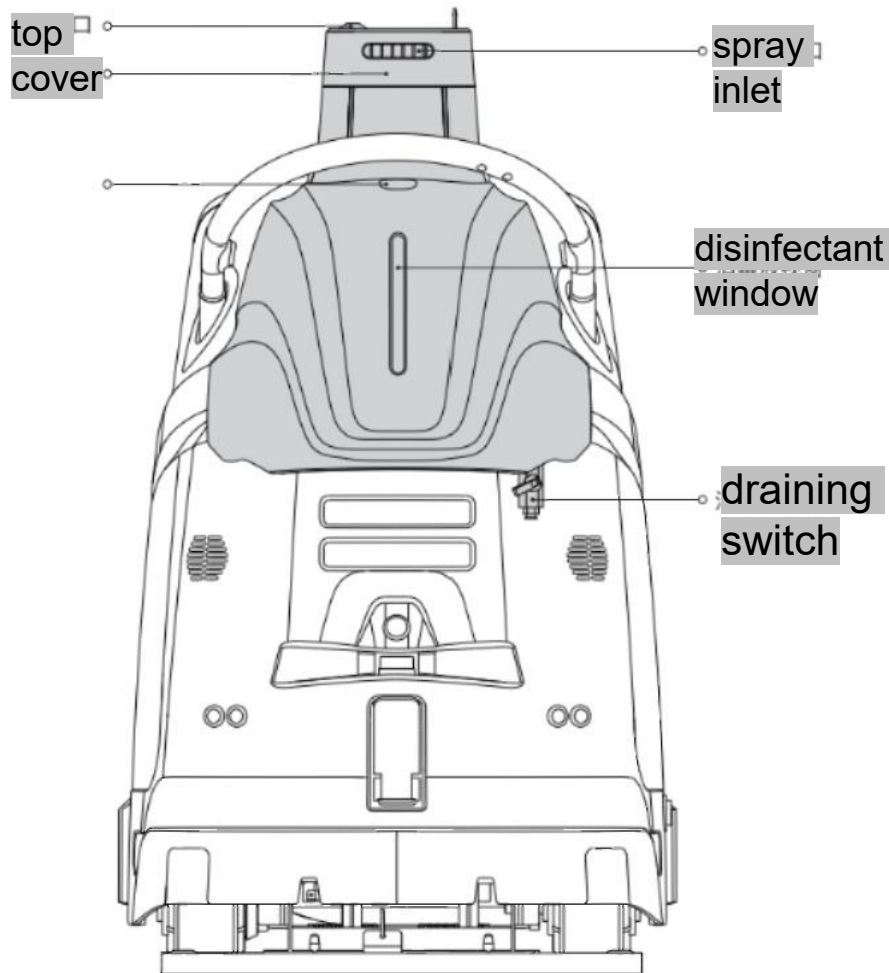
2



[Battery falls below the minimum working battery]

When the battery falls below the minimum working battery, the robot will automatically return to the workstation for drainage and charging (the default minimum working battery is 20%).

Note



Disinfectant instructions

Recommended disinfectant

- hypochlorous acid disinfectant; refer to the manual for the detailed method of application
- quaternary ammonium salt disinfectant; refer to the manual for the detailed method of application

Service Restrictions of Disinfectant

- Please do not use disinfectant with chlorine content. The representative products on the market include 84 disinfectant, chlorine-containing effervescent tablet, hypochlorous acid disinfectant, etc.

Such disinfectant is highly corrosive and irritative to the skin and mucosa. They cannot be used for air disinfection;

- Please do not use phenol disinfectant. The representative products on the market include Dettol and Walch which cannot disinfect the air. They are not recommended.

- Please do not use alcohol as it is flammable and volatile. The flash point of 75% alcohol is 23°C, making it First-class fire hazardous liquid.

To prevent alcohol explosion in a closed indoor environment, disinfection spray is forbidden;

- Please do not use ether or chloroform. Ether is flammable and explosive, and chloroform is prone to emitting highly toxic gas that leads to death.

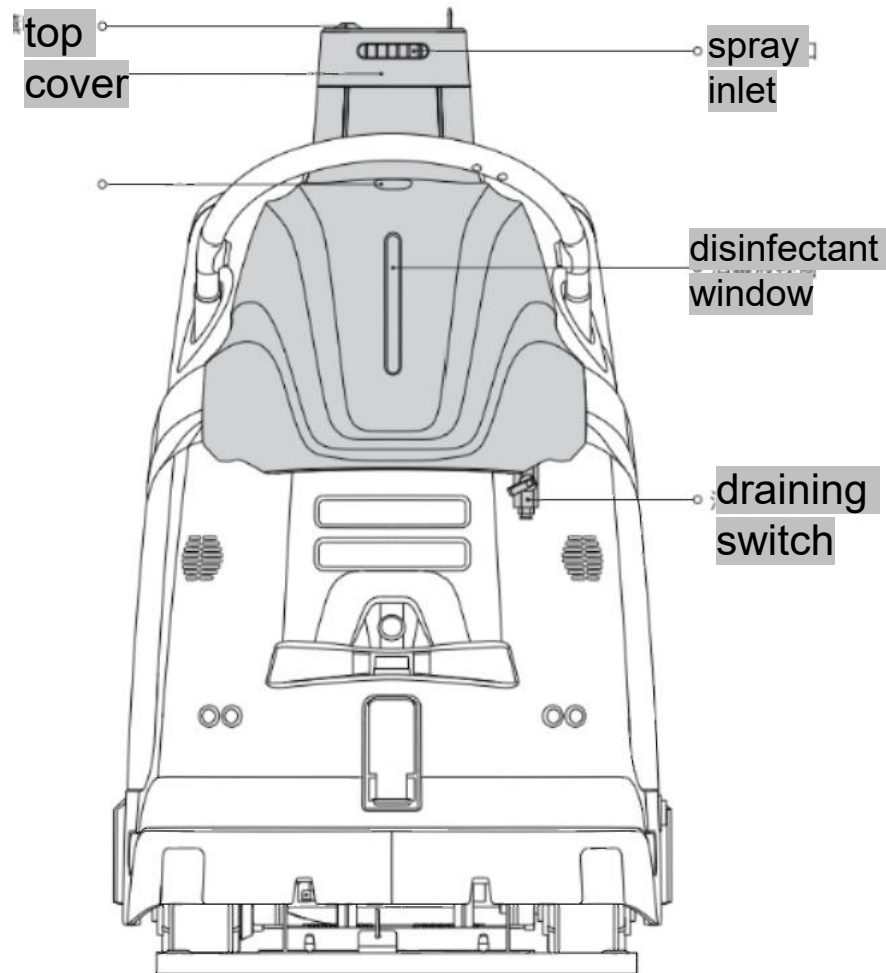
Therefore, such hazardous article is not recommended;

- Apart from the disinfectant restricted above, other disinfectants are not recommended.

Otherwise, the atomization effect and service life of robot might be affected.

There may even be health risks!

Aroma Instructions



Recommended aroma

·Aromatic essential oil with relevant national certification is recommended;

Service Restrictions of Aroma

·Please do not add powder, particle, clump, or other solid aroma. Otherwise, there may be blockage or other element damages;

·Please do not use aroma without relevant national certification, or there may be safety risk;

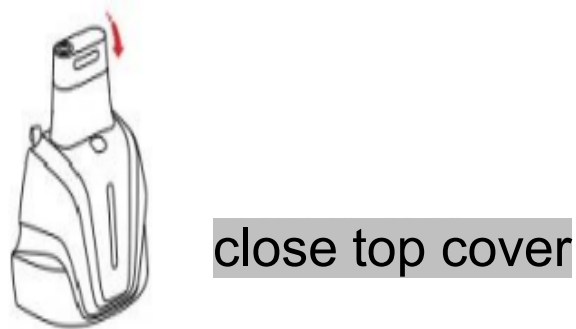
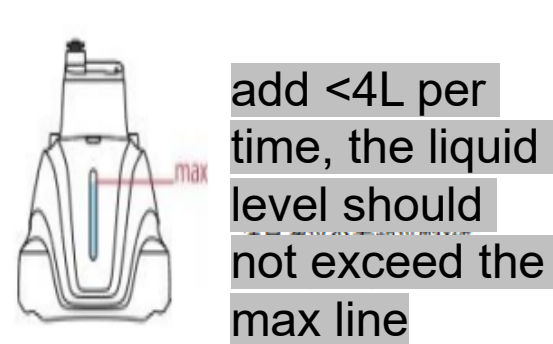
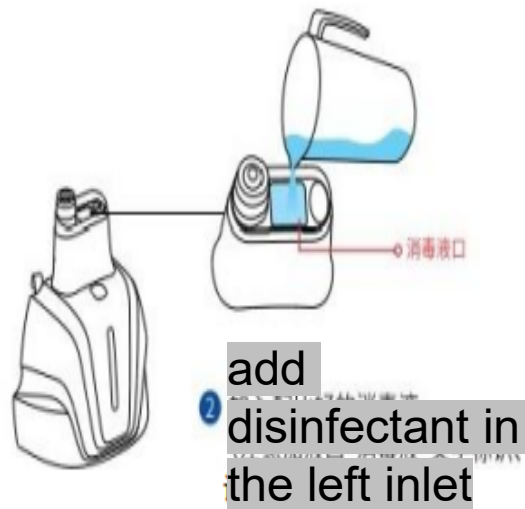
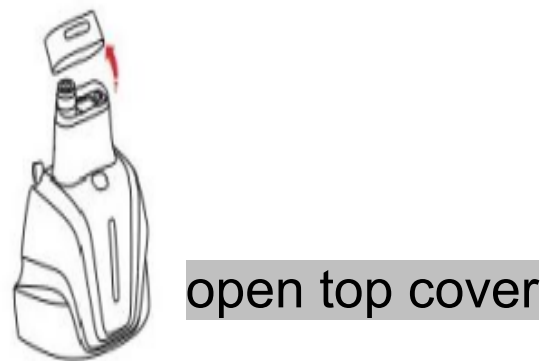
·Please do not use the mixture of aromatic essential oil and clean water, or the atomization effect and the service life of atomization element may be affected;

Operation Guide-Disinfection

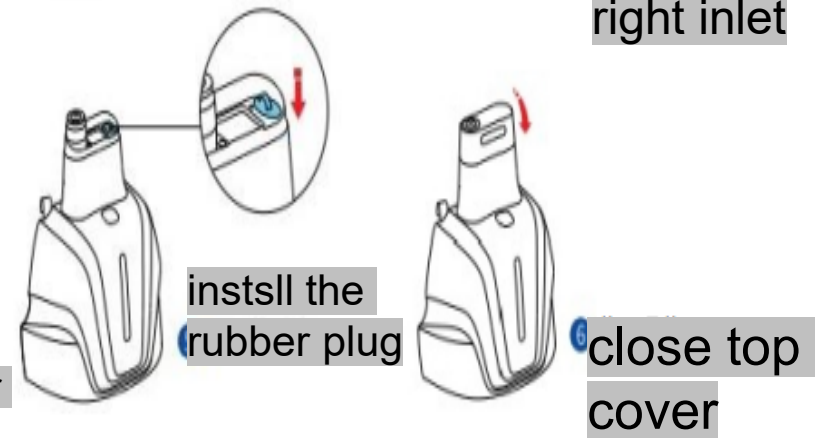
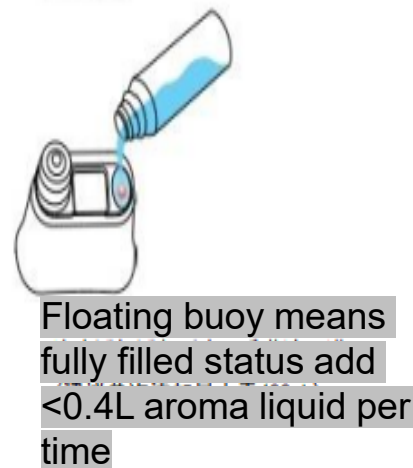
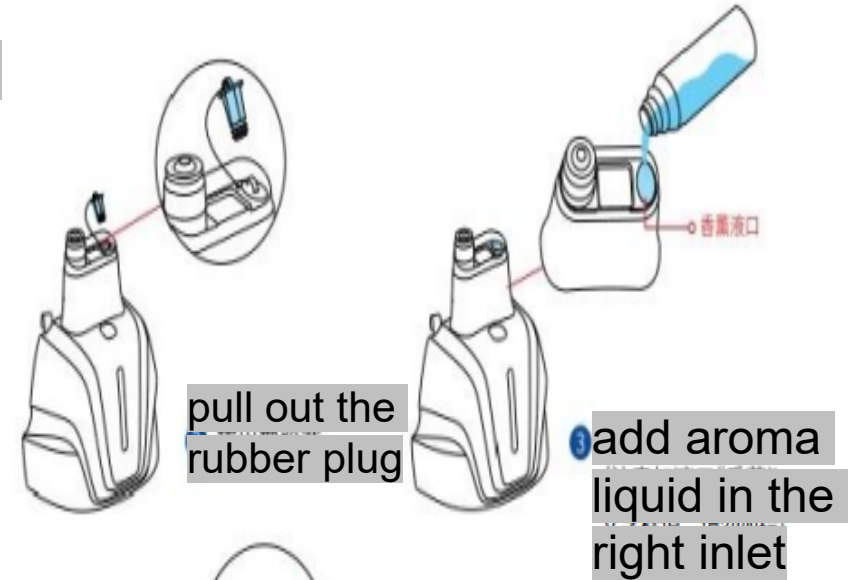
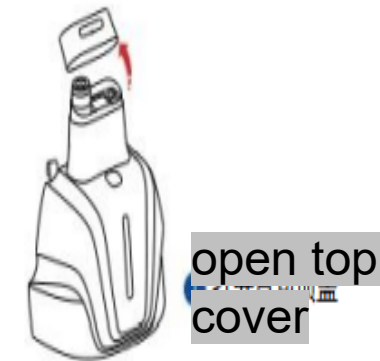
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Quick user guide

add disinfectant



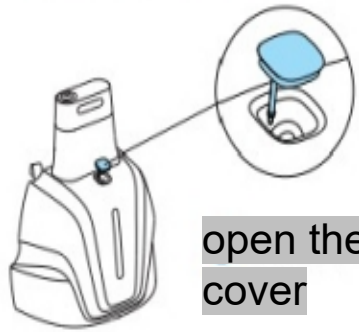
add aroma liquid



Operation Guide-Disinfection

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drain residual disinfectant



open the rubber cover



Pull the drainage pull ring upward until all the water in the atomization chamber flows to the water tank.



Put a container below the drain, and turn on the drain switch until the disinfectant in the water tank is completely drained.



Drain out the residual disinfectant, then turn off the drain switch.



open



close

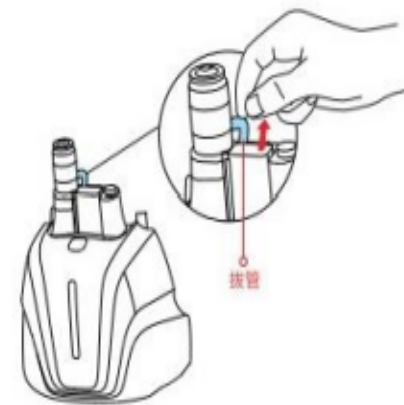
drain residual aroma liquid



open the top cover



Hold the shell with both hands and twist it upward. Take care to unhook the buckle and remove the shell.



pull the atomization pipe



Take down the aroma bottle, incline the bottle to discharge the residual liquid.



Assemble the aroma bottle

Maintenance:

- Please empty the disinfectant tank if it is not used for a long time.
- Clean the tank every 3 days--drain residual disinfectant, wash by clean water, drain the dirty water and turn off the switch.

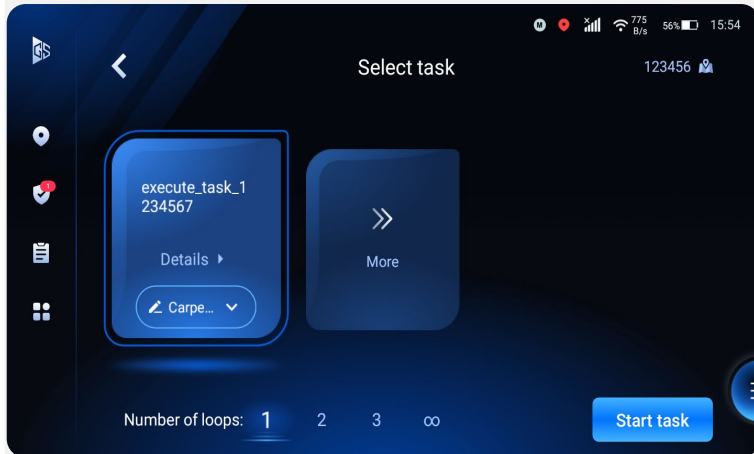


[Choose disinfection task]

Choose the corresponding map and task. Click start to perform the disinfection task.

Operation Guide- Transitional Operation

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[Switch robot mode to manual]

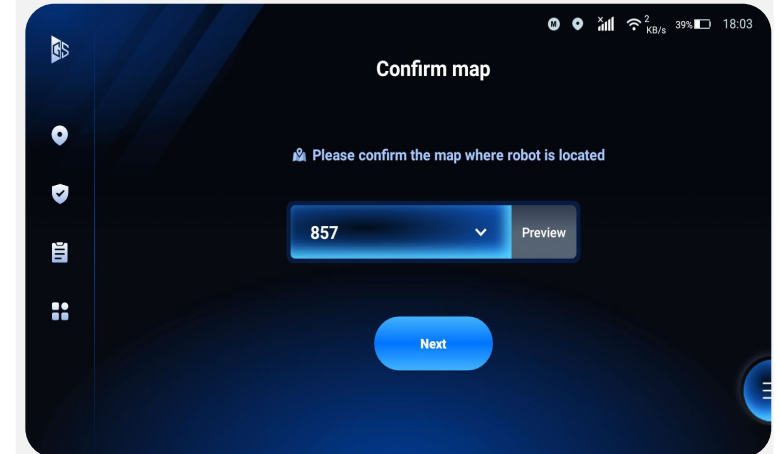
Click the floating button in the bottom right corner and choose manual operation.

1



[Push the robot to the scenario for operation]

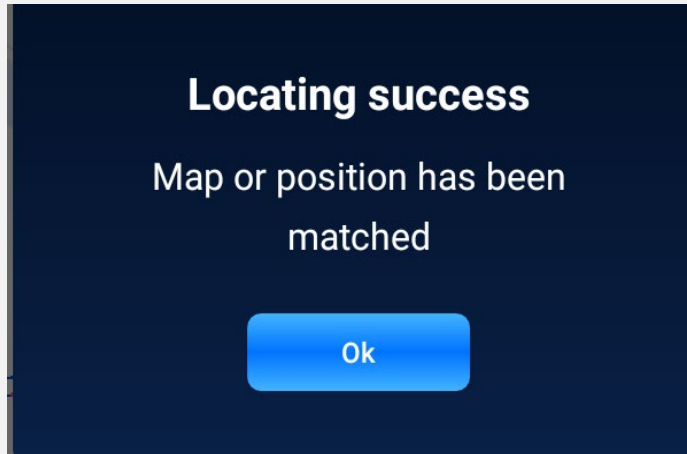
2



[Choose the corresponding map and perform positioning]

Choose the corresponding scenario map on the screen based on the name. Subsequently, click the positioning icon on in the left side bar to enter the positioning interface. Push the robot to the positioning point of the scenario, and click “arrived” and “confirm”.

3



[Confirm positioning successful]

Stay away from the robot. The robot might spin one lap in situ and then start automatic positioning. When the voice prompt of successful positioning is heard, make sure the positioning icon in the top right corner is white. In this case, the positioning is successful.

4



[Choose cleaning task]

In the task selection interface, slide the screen to the left or right to search for tasks. Select dust push or cleaning mode and cycle times. Click "start" to perform automatic cleaning after the transition.

5

Operation Guide-Switch between Dust Push and Dust Absorption Modes

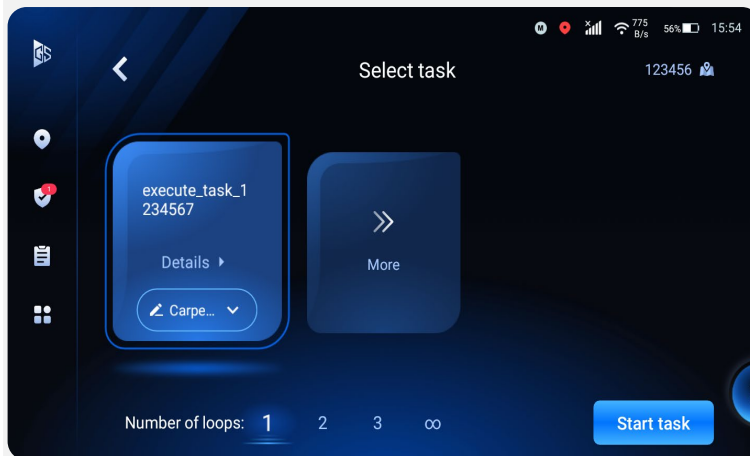
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[Check if the dust push cloth is installed]

GS40 commercial cleaning robot includes dust push and dust absorption modes. The dust push cloth and roller brush should be installed under different modes.

Note



[Switch robot mode to manual]

Click the floating button in the bottom right corner and choose manual operation.

1



[Open the rear shell and install the dust push plate and dust push cloth]

Open the rear cover and remove the dust push plate. Mount the dust push cloth and align it to the dust push plate buckle, and then install the rear shell.

2

Operation Guide-Switch between Dust Push and Dust Absorption Modes

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[Choose cleaning mode]

The muted dust push is the dust push mode. The carpet cleaning is the dust absorption mode. Click “Start” to start the task.

3

Let service robots serve every corner of the world